

WAVELENGTH DIVISION MULTIPLEXING
OPTICAL TRANSMISSION APPARATUS

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ABSTRACT OF THE DISCLOSURE

10 The present invention is directed to the provision
of a wavelength division multiplexing optical
transmission apparatus and, more particularly, to a
wavelength division multiplexing optical transmission
apparatus having high wavelength stability unaffected by
the temperature characteristics, aging, etc. of an
15 arrayed-waveguide grating (AWG) and its peripheral
components. The wavelength division multiplexing optical
transmission apparatus comprises: an arrayed-waveguide
grating 10 having operating input/output ports and an
input dummy port; a light emitting means 21 for
20 generating a pilot signal to be input to the input dummy
port; a light detecting means 22 for monitoring the pilot
signal contained in a wavelength division multiplexed
signal output from the operating output port; and a
temperature control circuit 11 for controlling the
25 temperature of the arrayed-waveguide grating in such a
manner as to cancel the amount of wavelength fluctuation
occurring in the arrayed-waveguide grating and detected
by monitoring the pilot signal.